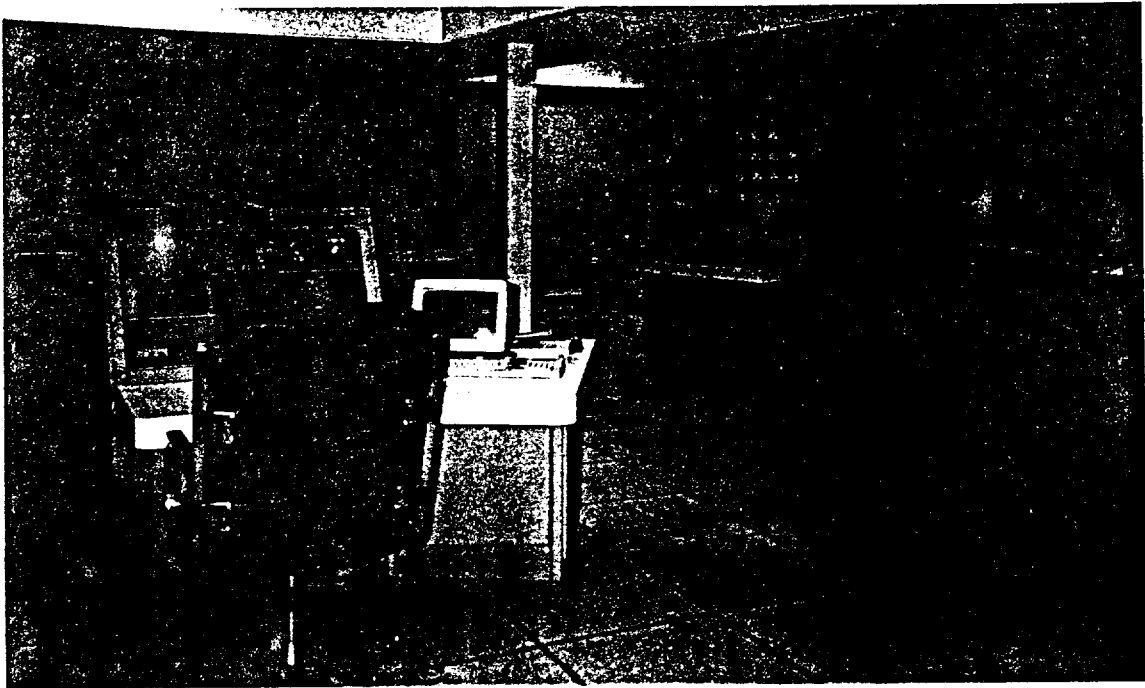


SUMMARY OF
DD-963 ECSS OPS TRAINER

May 1989
NAVAL TRAINING SYSTEMS CENTER

Device 20H5
ORLANDO, FLORIDA



TRAINING CATEGORY:

PROPULSION OPERATION CONTROL

ORIGINATING AGENCY:

NAVSEASYSOOM

SECURITY CLASSIFICATION OF DEVICE:

Device 20H5 is UNCLASSIFIED

PURPOSE OF DEVICE:

To provide normal and casualty conditions training for line officers and "watch standing" personnel of the engineering spaces in the DD-963 SPRUANCE Class Destroyer.

INTENDED USE:

Device 20H5 is a classroom training system that provides for the simulation of normal and casualty operation procedures for the DD-963 ECSS and is located at Surface Warfare Officer's School Pacific, Coronado, CA.

FUNCTIONAL DESCRIPTION:

Device 20H5 is used to qualify operator personnel on the engineering control station consoles, displays and alarms; to develop and exercise procedural skills and knowledge of operator personnel; to develop and exercise coordination skills and procedures of operator personnel.

The major components of Device 20H5/5 are:

a. Simulated operational equipment consoles which consist of one Propulsion and Auxiliary Control Console (PACC), one Propulsion Local Control Console (PLCC), and one Electric Plant Control Console (EPCC).

b. Digital computation systems with appropriate interface.

c. Program Operator Console (POC) provided for the Instructor/Operator. Consists of vertical or inclined panels containing controls, displays, instruments, lights, and other equipment necessary to set-up, control, and monitor the training missions.

d. Audio communication system has a minimum of two channels that is capable of multiparty (conference type) communications.

The trainer will simulate, in real time, applicable normal and emergency ship operation with respect to both transient and steady-state engine performance, ship systems operations and environmental effects. Such simulation will be reflected by trainer instrument and signal indications and control reactions responding to trainee and instructor control inputs.

The training environment is controlled and trainee responses are evaluated from the POC in view of all trainee stations. Control functions normally located at the ship's bridge are located at the Instructor Station. The capabilities of the Instructor/Operator include engine control transfer, initial problem selection through choice of operating parameters (initial conditions), and insertion of casualties. Trainer operation can be frozen, reset to the beginning of the exercise, or turned to a chosen point in time (snapshot).

Training problems can begin at any of ten initial conditions elected by the instructor. Machinery casualties can be inserted at will to train for proper procedures. The reset feature allows repetition of problems with minimal training delay. The freeze control permits immediate problem stop to discuss important training situations.

PHYSICAL INFORMATION:

Device 20H5 consists of the following major systems:

- Power Distribution System
- Computer System
- Data Logger
- Three Trainee Stations
(PACC, PLCC, EPCC)
- Instructor Station (POC)
- Intercommunication System
- Sound Generation System

EQUIPMENT REQUIRED (BUT NOT SUPPLIED)

None

POWER REQUIREMENTS:

208Y/120VAC, 60 Hz, 3 Phase, 4 Wire, 45KVA

PUBLICATIONS FURNISHED:

NTSC P-5943, Operation and Maintenance Instructions With Parts Catalog; NTSC P-5944, Planned Maintenance System (PMS) Document; NTSC P-5945, Commercial Computer Documentation Set (CCDS); NTSC P-5946, OJT Handbook; NTSC P-5947, Instructor's Utilization Handbook. All technical manuals are unclassified.

PERSONNEL:

One Roving Instructor and One POC Operator.

OPERATOR:

Qualified Instructor/Operator

TRAINEES:

3 Hands-On and 3 Over-The-Shoulder

MAINTENANCE:

Contractor Operation and Maintenance of Simulators (COMS) (5 minutes Daily Operational Readiness Test (DORT) and 30 minutes/day Preventive Maintenance).

CONTRACT IDENTIFICATION:

Manufactured by DynaLantic Corp., Deer Park, New York under NAVTRASYSCEN Contract Number N61339-86-C-0131.

Reproduction of this publication in whole or in any part is permitted for any purpose of the United States Government.